

## USPATFULL

AN 97:81250 USPATFULL  
TI Pharmaceutical formulations  
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PA Skua Investments Limited, Douglas, Isle of Man (non-U.S. corporation)  
PI US 5665700 19970909  
AI US 1994-290293 19940815 (8)  
RLI Continuation of Ser. No. US 1992-927394, filed on 6 Nov 1992, now  
abandoned  
DT Utility  
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Gupta, Anish  
LREP Hale and Dorr LLP  
CLMN Number of Claims: 46  
ECL Exemplary Claim: 1  
DEWN 10 Drawing Figure(s); 10 Drawing Page(s)  
LN.CNT 1494

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CLM What is claimed is:

1. A **water-in-oil** pharmaceutical formulation for  
**oral** or rectal administration comprising a hydrophilic phase  
dispersed in a lipophilic phase to form an emulsion, wherein said  
hydrophilic phase. . . .
20. A **water-in-oil** pharmaceutical formulation for  
**oral** or rectal administration comprising a hydrophilic phase  
dispersed in a lipophilic phase to form an emulsion, wherein said  
hydrophilic phase. . . .
40. A **water-in-oil** pharmaceutical formulation for  
**oral** or rectal administration comprising a hydrophilic phase  
dispersed in a lipophilic phase to form an emulsion, wherein said  
hydrophilic phase. . . .
41. A **water-in-oil** pharmaceutical formulation for  
**oral** or rectal administration comprising a hydrophilic phase  
dispersed in a lipophilic phase to form an emulsion, wherein said  
hydrophilic phase. . . .

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M. Borin

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AN 1978-34432A [19] WPIDS

TI **Water-in-oil** type emulsion suitable for  
**intravenous** admin. - prepd. by heating an aq. soln. of drug or  
nutrient and gelatin and mixing with heated fat and oil.

DC B07 D23

PA (KYOW) KYOWA FERMENTATION KK

CYC 1

PI JP 53034915 A 19780331 197819 \*

PRAI JP 1976-187891 19760910

AN 1978-34432A [19] WPIDS

AB JP 53034915 A UPAB: 19930901

A new process for prepg. water-in-oil type emulsions comprises heating a  
soln. of drug or nutritive agent and gelatin at 60-90 degrees C., and  
then  
mixing the soln. with a fat and oil preliminarily heated at 60-90 degree  
C.

**Water-in-oil** type emulsions when applied  
**intravenously** stay in the blood capillaries and slowly release the  
drug into the tissue; thus, the high tissue level of drug (e.g.  
antibiotics, anti-tumour agents, analgesics) can be kept for a long  
period  
of time. The emulsions, however, are not so stable in preservation  
because they are resolved into the oil and water. The mixing of gelatin  
into the emulsions eliminates such disadvantage; and the resulting  
emulsion even after preservation for a long period is restored to the  
original state by moderate shaking.